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On
Hæmoptysis

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Before entering on the subject under consideration, it is necessary to make a few remarks on the pulmonary apparatus and its lining membrane.
This apparatus performs three grand functions, the first, is the aeration of the blood, the second, is pulmonary exhalation, the third, is the production of sound, which, in man, being variously modified by intellect, forms speech, singing, et cetera.
From the complex functions of this apparatus, we must naturally suppose, that it is more liable to disease than most organs, especially those that perform but one function; of which we have a good exemplification in machinery, the more complicated, the greater is the liability to be deranged.
The pulmonary apparatus, comprising the

larynx, bronchia, and its ramifications, is lined internally, by a delicate membrane classed by Bichat under the head of mucous membranes.
This membrane is highly organized, being composed of blood vessels, nerves, lymphatics &c. It possesses great sensibility and vital powers, which will enable us to distinguish it from other organs.
Broussais, who has enriched the profession with an elaborate treatise of physiology, applied to pathology, thinks that the mucous membranes should be considered an organ of sense.
The sympathies of this surface, are numerous; they may be remote, contiguous, or continuous.
The functions of this surface, being one of the emunctories of the animal economy — and performing the office of absorption.

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Hæmoptysis is derived from two greek words which signify to spit blood. A genus of disease arranged by Cullen in the class pyrexia and order hemorhagia. It has been divided into active and passive; the former, is attended with a development of vital forces; the latter is characterized by a deficiency of action, and is usually produced by some organic disease, designated by the term debility; on which, physicians have founded a practice that has proved fatal to thousands. But, the present physiological investigations bid fair to remove this evil from practice.
Hæmoptysis is a spitting of blood, which may come from the fauces, bronchia, or lungs; but most frequently from the latter.
When, from the fauces, it is by hawking, without pain, cough, oppression, or febrile excitement, sometimes, we are able to distinguish its source by a close examination.

When from the trachea, it is often the precursor of phthisis. It is not very easy to distinguish whether the hemorhage is from the trachea or lungs; the blood from the trachea is of a darker colour, and not so frothy, besides, the constitutional symptoms are less urgent.
The discharges from the lungs is of a light florid or vermilion colour, frothy, and brought up with more or less coughing.
The symptoms which precede a flow of blood, are a sense of fulness, weight, tightness or oppression about the chest, which is increased by a full inspiration, some uneasiness in breathing; sometimes we have the phenomena of fever developed, such as shiverings, pain in the back, head, and loins, flushed face, lassitude, costiveness, dry skin, coldness of the extremities, and a quick hard pulse.

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These are liable to variations; sometimes the pulse is small and scarcely perceptible. a short time before the hemorrhage takes place, there is more or less pulsation at the fauces and larynx, with a peculiar metallic taste in the mouth. It frequently occurs without any premonitory symptoms. The quantity of blood drained may vary; sometimes the expectoration is very large, at others, the discharge is so profuse as to threaten the life of the patient.

It commonly occurs for several days together, intermitting and being excited by slight causes; such patients will, for a long time.

Professor Chapman remarks, that a great majority of cases occur at night, when the patient is in bed. This observation is not confined to the species of hemorrhage, but is equally applicable to phthisis.

He thinks it may be owing to an increase of sensibility, in the vertical position of the legs than in.

According from analogy, there can be no doubt the horizontal position some, is the cause of its occurrence in the night, for in an inflamed limb, in which we wish to avoid hemorrhage, we must elevate it to retard the flow of arterial, and to facilitate the return of venous blood. From the colour of the blood in hæmoptysis, it is generally admitted to be arterial.

The connection between hemorrhage from the lining membrane of the lungs, and inflammation of it, is almost inseparable. By attentively observing the phenomena which precede a flow of blood, and those which accompany inflammation; we cannot distinguish, until there is a discharge of blood.

There is, in hæmoptysis a considerable degree of irritation if not inflammation; and if the discharge of blood did not take place, we should have in a majority of cases, very active inflammation, if not arrested by appropriate measures.

Very often, if not always, we have the phenomena of fever; which, according to the present doctrine in the physiological schools, must be preceded by, or accompanied with local irritation or inflammation.

To illustrate this point more fully, we will allude to dysentery, which is generally conceded to be of an inflammatory nature from its, if not always, the blood contained in stool, or mucus partially coagulated.

They may be divided into pectoral from and exciting, which, will in some measure guide us in our treatment; and enable us to form some idea upon the

probable termination of the disease.
The predisposing causes may be viewed under four heads. The first is phthisis but this is not as often the cause as was supposed by the old writers.
The second predisposing cause, is the scrofulous diathesis, a that habit which is marked among other peculiarities, by a remarkable delicacy of structure, light and thin hair, soft smooth skin, a lax fibre and great mobility of tissue; to these may be added the sanguine temperament.
The third predisposing cause, is characterized by a particular conformation; as prominent shoulders, narrow chest, long neck, and a slender form.
The misconformation of the chest acts very obviously, by preventing, or not allowing sufficient space, for the free expansion of the lungs. Persons, who have suffered in early life from scrofula to such an extent as to

affect the ribs or spine, are very liable, after the age of puberty, to haemoptysis.
The fourth cause, giving a predisposition, is the period of life. It rarely occurs in children under 12 years of age, and is not frequent after the age of 35; of the two, it occurs oftener after the latter, than before the former. It chiefly prevails between the ages of 15 and 25.
Pathologists have attempted in several ways, to explain this circumstance; it is said by some, to depend upon the growth of the thorax continuing after other parts of the body have been fully evolved; which is manifested by the increased width which the chest requires at that time.
It is more reasonable to suppose, that the enlargement of the chest, has a tendence to prevent, rather than predispose to hemorrhage, being the cause of the narrow chest, which has been alluded to.

Doctor Cullen has imputed it in part, at least, to a want of due balance between the vertebral and pulmonary systems, which is felt most at this time; when the former has arrived at its utmost extension and relaxance. By his position, the latter is the more flexible, though, it is thought, not to be a correct explanation of this somnolent circumstance.

In sudden death it may be asserted, there can be no doubt as to the precise circumstances of the sufferer, that the moment the vital spark is fled, gives a somnolent position to hemorrhagy from the lungs.

Exciting Causes. They may be divided into direct, and indirect; the direct exciting causes are violent exertions of the body, as running, jumping, & written; sudden alarm has frequently produced it, increased secretion of the lungs, to cough and cry

shaking, of which we have a striking exemplification in clergymen; those who play much on wind instruments, bassoons &c are engaged in blowing pipes, are very liable being under the influence of two powerful causes, resent exertion of the lungs and extreme heat at the same time; heat alone is a very active agent in producing hemorrhage generally the pressure of the atmosphere has a considerable influence in producing the hemorrhage, for a striking instance of which we will allude to persons piping from a tube, to a rare atmosphere, as in ascending high mountains.

A person, lord Cathcart, Sir R. remarkable cases of hemoptysis occurring in a distinguished author. The cause of the stress from the barometer, it was found, that the atmosphere was agitated at that time. Man

it had all before been known to be
in that case.

The hemorrhage seems to depend on
spring on the commencement of warmer, which
in medicine may be owing to the increase
of temperature, and rarefaction of the atmosphere.
Longitude to the world, a similar case
to the 1st, of which a very blustering
case came under my observation in August
1827; which was relieved by removing a portion
of the world.

The natural exciting causes are cream;
wet as well living; and the pressure of
wind and the diminution; when the stomach
is overloaded it attempts the secretion of
blood in some degree. Elevation of at-
mospheric temperature, the sudden exposure
to cold after being overheated; the suppression
of some accustomed secretion, as the
menses; is a new fact to dwell on it;

chronic hemorrhoids and cancerous, trying up of old sores or trauma, accompanied with disease ungratified, and sometimes the amputation of a limb.

Diagnosis; the real disease with which it is apt to be confounded, is hematemesis or vomiting of blood; but by a careful attention to the symptoms it may generally be distinguished. In hematemesis the blood is usually brought up in vomiting, of a dark pulmonic appearance, usually mixed with the contents of the stomach, is generally larger quantity, and the system is more affected, the pulse is feeble, and sometimes there is irritation. In hemoptysis the blood is brought up by coughing, is of a light pink appearance, homogeneous, and mixed with mucus.

Prognosis; as cancer is a local disease and the mere extension of cancer is generally

It is not to grow Professor Chapman says that in the work of his treatise, which we know is to be continued, he has made no distinct allusion to the management of pleural cases, and to which we can see no such proper action.

In a large majority of cases, cases in which the lungs are not a simple tense expiration of air, immediately after the operation, according to the observations of Dance, who is eminent in this department of medicine, the lungs of those he noticed contained patches of a whitish lymph, some serous fluid, small incumbrances, and surrounded by just hepatized expiration. The inferior portion is not necessarily pneumonic induration; but there is to be a strong congestion and then with the pneumonic lymph.

The portions, thus isolated, placed when cut so smooth, were found to respect; while the other portions of the mass were more than saturated, mixed with a slimy, bloody serum, which respect were numerous were made out.
The mucous membrane of the lungs, was of a deep red color.
As regards the pathology of complication, when from violence, there is a rupture of the bronchi, and the same vessels will be according to the extent of the lesion; thus it is rare recovered.
When recovery spontaneous it is an exception; the mucous membrane of these tubes, deprived with retained mucus, in a hypercrinism state, pass out mucus, but in a normal condition the rood is retained unchanged.
In conformity to the division of complication,

passive hemorrhagy next requires our attention; but the most that can be said of it has been anticipated in the history of active hemorrhagy.

The flow usually occurs without much coughing, and is often accompanied with extensive disease of the lungs; the countenance is pale and emaciated, although there appears to be health of the system generally, there is an excess of action in the lungs. The stress of hemorrhagy is usually, if not always, an exhalation. Treatment of active hemorrhagy is divided into two kinds. First, that which is necessary for the suppression of the hemorrhagy. Second, that which is necessary to prevent its recurrence, after it has been arrested. The latter has been too much neglected; the success of the patient is often sacrificed with the mere suppression of

the hemorrhage, and will soon return to its normal habits, and bring on another paroxysm. The physician should also make known to the patient the importance of a prophylactic treatment, and state that the result which would arise from a noncompliance.

Treatment. In high fever with blood, when the symptoms of fever are lowered, is most beneficial, accompanied by depletion with a active purge; the chief indication is the reduction of internal heat; the best means for accomplishing it is venesection. The plan of treatment has been questioned by high authorities, but then now is so palpable that it will scarcely be noticed.

The extensive wounds of the lungs with internal hemorrhage, demand immediately resort to bloodletting with the most

decided benefit. The rational principle of blood letting, is obvious; pain is a remedy; disease, by removing a portion of the circulating mass, a part of which would come from the lungs and their appendages. To produce this effect the quantity to be taken, must be regulated by the state of the patient; we should always bleed from a large orifice in preference to a small one, for we can produce a decided impression without the patient suffering as much from debility, which is always a result of the first importance.

It is true common for writers to specify the quantity of blood to be taken, times which there is not a greater absurdity in medicine. In spite of our rational view of the disease constitution, the temperament, habits, age &c. we might with propriety, order ten or fifteen ounces of blood to be taken;

but we cannot find any the patient's have
[illegible] belong, [illegible]
with stake. It is this determination which
raised our profession, in a measure, from the
fetters of empiricism, to rank of a more ex
alted station, that of a science.
The extent to which bloodletting may be
carried, I can only say that more
larger results from the timed use of
the lancet, than from its being carried
too far. There is a very interesting case recorded
in the second volume of Professor
Eberle's Medical Museum, a communica
tion from a clergyman to the late
Professor, in which stating his own case and
the extent of bloodletting, being twelve
times in ten days, with the loss of ten
gallons of blood, after which, he recov
ered his health entirely, and did not
suffer from another attack.

Small and repeated bleedings have been recommended, but the practice is not much used, but highly pernicious, producing debility without stopping the flow of blood. Topical bloodletting may be resorted to after general, either cups or leeches may be used, if these the former is the best, being a more powerful revulsive.

Blisters may be resorted to after the reduction of arterial action, and are best suited to those cases attended with cough, and stricture, or tightness about the chest.

Common salt was highly spoken of by the late Dr Fraser; it seems probable it may be serviceable; it appears to be much better suited to the former cases attended with constipated bowels.

Cold drinks and cool air should next

next in importance to breathing, the drinking very coarse of the water, lemonade, vinegar and water the little will be treatment were, if the patient is not kept in a cool and well ventilated room; comfort, should be recorded, any thing that has a tendency to excite the nervous system must be removed; he should be placed in bed with his shoulders elevated, and his extremities extended; the importance of the latter, was first noticed by Dr Physick.

Cold applications to the surface, as wrapping the patient in wet blankets, have been recommended, it is a very dangerous practice, and should be avoided. it doubtless injurious action and pass the blood to internal organs; nothing has a better tendency to induce apoplexy or an inundation of the lungs.

Digitalis has been proposed as a substitute for the lancet, but it will in no manner suffice for that important agent; the case to which it is most applicable, is a small quick pulse, and great weakness, accompanied with a hard dry cough; under these circumstances little benefit will result from its use, if the stomach is not in a physiological condition; a point too much neglected by those who have bestowed such high encomiums on this article.

Sometimes hemoptysis may be cured by a mere nutritive, than the injudicious exhibition of tonics or stimulants, or, perhaps, both; it will be seen under the proper head of Diagnosis, that it is a symptom of various diseases, and must be cured otherwise than by mere cough remedies. Cases have been cured by Professor Chapman

with the most decided benefit; they are active venous, and require discrimination in their use; they appear to be inadmissible when bloodletting is strongly indicated, or when the stomach is in a pathological state. By not attending to this, they may produce effects which are tenfold more formidable than the disease for which they are administered. In chronic cases, when the stomach is in a perfectly normal state, they may be given to produce a revulsion.

Refrigerants have been long used in all cases of moderate arterial action. Often times, the nitrate of potash, is most certain in its action, it appears to act as a sedative, and is admissable, when the phenomena of fever are ductyred such as thirst, &c. &c.

When it is brought on by a suppression

If pain [illegible], the remedies must be directed to it. Opiates may be at times useful but is inferior.
Headache of typhoid character, is best relieved when the system is weak by [illegible]. Blood-letting and wet cloths are inadmissible. The indication is to give tone to the system, at the time we are endeavoring to arrest the flow of blood. The best means for long check, are the reflexive use of extreme pain and tonics. The sulphate of quinine, and clean calomel, are entitled to the greatest share of our confidence. The preparations of iron may be used sometimes with the most decided benefit.
Topical blood-letting is necessary to relieve cough, oppression, and dyspnoea; if the symptoms do not yield to it, a large blister should be applied over the chest.

It is recommended to apply blisters to the extremities; but a great object is to locate the disease in some organ or tissue, and apply the remedies as near as practicable to the diseased organ or tissue; blisters on the extremities, in case of debility, sometimes produce gangrene, two strong examples of which came under my observation in the Philadelphia and Bonds epidemic, one in July, the other in August, 1848.

What should be conjoined with these medicines, are invigorating diet, moderate exercise, and the liberal use of malt liquors. Treatment to prevent a recurrence, as it has been urged. Every thing which has a tendency to excite arterial action, should be avoided, — lascivious excesses, as exciting mental, and corporeal excitement, wine and —

alcoholic liquors. The bowels should be kept open by mild purgatives; of these the saline should be preferred; if torpid, the mercurial purgatives, as calomel, and the blue pill, should be given, if not contraindicated.
The occasional use of nitrate of potash, conjoined with moderate exercise on horseback or sailing, has been productive of the most decided benefit.
The diet should be of the mildest kind, such as the farinaceous articles.
The drinks should be cool and acidulated; the mineral waters are very good, particularly those impregnated with carbonic acid gas.
In concluding this essay, it is seen, that, I have omitted the medicines called astringents; and not without due reflection; for it is not at all intelligible how such medicines can act on the

lungs, when applied to the mucous surface of the stomach. These medicines were first employed from analogy of action on other parts to which they were applied, and routine of practice has kept them popular resources until the present time. But in this enlightened epoch of medicine we should not permit custom to overcome sound reasoning without which our profession would be a fabric formed of the weakest materials. Of this class of medicines, the Sugar of lead has held the highest rank, and not without some merit. Its modus operandi appears to be obvious. In small doses a sedative effect is produced:- in large, it either vomits or purges — and thus proves beneficial as a revulsive. Admitting these remedies could act as astringents, would it not be hazardous to use them in active hemorrhagy verging to inflamation? we might induce pulmonary apoplexy or pneumonia.